

The Hong Kong University of Science and Technology

Dept of Information Systems, Business Statistics
and Operations Management

Seminar Announcement

Creating Social Contagion through Firm-Mediated Message Design: Evidence from a Randomized Field Experiment

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Date : 19 January 2016 (Tuesday)
Time : 10:30 am - 12:00 noon
Venue : ISOM Conference Room 4047, LSK Business Building



Abstract: I study whether and how a firm can enhance social contagion by simply varying the message shared by customers with their friends. I focus on two key components of information contained in the messages – information about the sender’s purchase status prior to referral, and information about the existence of referral rewards – and their impacts on the recipient’s purchase decision and further referral behavior. In collaboration with an online daily deal platform I design and conduct a large scale randomized field experiment to identify the effect of each message component, as well as the interaction effects between them, in creating social contagion. I find that small variations in message content can have a significant impact on both recipient’s purchase and referral behaviors. Specifically, I find that i) adding only information about the sender’s purchase status increases the likelihood of recipients’ purchase, but has no impact on follow-up referrals; ii) adding only information about referral reward increases recipients’ follow-up referrals, but has no impact on purchase likelihood; and iii) adding information about both the sender’s purchase as well as information about the referral rewards increases neither the likelihood of purchase or follow-up referrals. I further examine the underlying mechanisms driving social contagion by exploiting the rich heterogeneity in product, recipient, sender and social tie characteristics. By applying novel machine learning techniques on the high-dimensional dataset, I am able to identify important moderators of treatment effect from a large number of covariates. The findings of the study provide valuable guidelines for optimal design of messages at the aggregate as well as at a more granular level.

Bio: Tianshu Sun is a fifth year PhD student at the Robert H Smith School of Business, University of Maryland College Park. Tianshu's research conducted in collaboration with leading private and public sector platforms addresses how organizations can use business analytics and field experiments in conjunction with big data to improve business decisions. His current research focuses on understanding how digital platforms can use IT-enabled and analytics-driven interventions to influence information sharing among individuals, as well as how organizations can use mobile and smart devices to influence individuals' offline behaviors. Tianshu has worked closely with the data science research teams in a variety of organizations including LivingSocial, Adobe, Efficient Frontier, Ministry of Health, Collage.com, and Zhima Tech, among others. Tianshu has given over 25 talks at top international conferences and workshops including ICIS, WISE, CIST, WITS, INFORMS, SCECR, WINS@NYU, and CODE@MIT. He has research papers under review in top tier journals including Management Science, Marketing Science and Journal of Health Economics. Tianshu's research has received six Best Paper Awards as well as a number of honors, and has been supported by grants from the US Department of Education, the Soros Foundation, the Marketing Science Institute, and the National Science Foundation.